Singapore’s Data-Sharing Model: GeoSpace

The Third UN-GGIM-AP Plenary Meeting
Bali Indonesia
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• Coordinates: 1° 17' N 103° 50' E
• Area: 718.3 km²
• Population: 5.4 million
• Population density: 7,615/km²
1. Optimise land resources
2. Maintain National Title Registry and Land Survey Systems
3. Drive Singapore’s geospatial development and support Smart Nation initiatives

Limited Land • Unlimited Space

Goals & Vision

A Spatially-Enabled Nation

- National level decision making
- Public Security
- Cost effective Business
- Location awareness among citizens
Developing Singapore’s Data Coordination and Governance

Hub & Spoke Model

Pre 1980s: Uncoordinated Bilateral Arrangements
1990s – 2000:
1. Land Data Hub
2. People Hub
3. Business Hub
Mid 2000s:
SG·SPACE Whole-of-Government Coordination
Linking Arrangements
Data Management
Analytics Platforms

Developing Singapore’s Data Coordination and Governance

Hub & Spoke Model: Benefits

1. Cost Effectiveness
2. Efficient Data Sharing
3. Sustainability of Operations
4. Ease of Maintenance

More Participating Agencies (More Spokes)
Our Early Beginnings – Land Data Hub
First Step Towards Public Sector GeoSpatial Collaboration

Formed in the 1980’s

A one-stop resource centre

Pioneering public sector collaboration

Challenges

Resource Intensive

Disparate GIS data formats & platform

Tedious and massive data translation and conversion effort

Need for more timely data

No incremental data updates from agencies
Technological Leap - LandNET

“Share to Synergise”

I. Integrates spatial data across heterogeneous GIS systems

II. Facilitates online access and exchange of up-to-date, ‘real-time’ spatial data

1. View and overlay GIS online
2. Query and search GIS data

3. Select and export data
4. Public sector collaboration
Agency Demand for GeoSpatial Information Surges

LandNET

Need for Geospatial Data

Agencies actively using GIS

Limited Supply

65% Demand Push

35%

83%

17%

Singapore GeoSpatial Collaborative Environment
GeoSpatial Data as a Strategic Resource

Extensive collection of GeoSpatial information ➔ Overlay & consolidate GeoSpatial layers ➔ WOG platforms for data sharing, analysis and solution generation

Singapore’s GeoSpatial Framework: 6 Ms

- Mandate
- Institutional Arrangement
- Medium Geo-Platforms
- Money Funding
- Manpower Capacity, Adoption
- Method Governance & Policy
- Material Data
- Policy
- Service
- Commerce
- Planning
- Analytics
- Civic
- Applications

6 Ms

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GeoSpace: A Hub for Govt Data

Accessible to ALL agencies
Safe intranet environment
688 data layers
39 contributing agencies
88 registered agencies

- Transportation Data
- Satellite Imagery
- Geological Data
- Base Maps

Integrated & Synergistic Use of Data

Demographic Data
Property Data
Business Data
Environmental Data

Central GeoPlatform

Internal-Collaboration
External

AGENCY SPECIFIC SYSTEMS

- 494 data layers by 38 agencies
- Accessible to ALL public officers

Common Platform: GeoSpace

OneMap

Tackling Climate Change

EmCommUnity

Safe intranet environment

Multi-Window Public Access

General Public

NGOs

Educational Institutions

Businesses
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1. Encourage sharing of data | | |
   a. Increase No. of data layers uploaded online | 216 | 688 |
   b. Increase No. of agencies using online sharing | 14 | 84 |
2. Increase use geospatial data | | |
   a. Increase No. of supported data formats | 9 | 16 |
   b. Increase No. of registered portal users | 363 | 2791 |
3. Spur downstream applications and services | | |
   a. Increase the no. of applications and services | 10 | 28 |

Geospaces Achievements

Awards and Accolades
Encourage Government Agencies to Share Data

Increase use of accurate and timely geospatial information

Facilitate E-Consultation & Collaboration among Government Agencies

Quick Discovery & High Usability

Spur Downstream Inter-agency Applications & Services

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